

CLAIMS

1. A process for recycling fines produced during the production of powder coatings comprising the steps of:
heating the fines without fully melting or cross-linking them until they become sufficiently tacky to form an agglomerated mass;
cooling such agglomerated mass; and processing the agglomerated mass to produce particles of a desired particle size.
2. A process as claimed in claim 1, wherein the fines are heated for 30 minutes to 4 hours.
3. A process as claimed in claim 2, wherein the fines are heated for 2 hours.
4. A process as claimed in any one of the preceding claims, wherein the fines are heated at a temperature of 60-80° C.
5. A process as claimed in claim 4, wherein the fines are heated at a temperature of 70° C.
6. A process as claimed in any one of the preceding claims, wherein after cooling, the cooled agglomerated mass is crushed to produce particles of a desired particle size.
7. A process as claimed in claim 6, wherein the cooled agglomerated mass is crushed to produce particles having a size of 3.00mm-212 microns.

8. A process as claimed in claim 7, wherein any crushed particles having a size of less than 212 microns are removed.
9. A process plant for recycling fines in accordance with a process for recycling fines as claimed in any one of the preceding claims, the process plant including:
means for transporting the fines to be recycled into a heating area and then into a cooling area.
10. The process plant of claim 9, wherein the means for transporting the fines into a heating area and then into a cooling area is a moving belt.
11. The process plant of claim 9, wherein the means for transporting the fines into a heating area and then into a cooling area include a screw feed unit.
12. The process plant of any one of claims 9 to 11, wherein the means for transporting the fines into the heating area and cooling area work continuously.
13. The process plant of any one of claims 9 to 12, wherein the heating area includes heating means which, in use, heat the fines without fully melting or cross-linking them until they become sufficiently tacky to form an agglomerated mass.
14. The process plant of claim 13, wherein the heating means include at least one infra red lamp.
15. The process plant of claim 13, wherein the heating means include at least one ultra violet lamp.
16. The process plant of any one of claims 9 to 15, wherein the cooling area includes means for producing a cool stream of air.

T0409064260